

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) A gastric electrical stomach stimulation apparatus, comprising:
having (1) a pulse generator located ~~outside of the body;~~
(2) an external coil ~~connecting~~ connected to the pulse generator;
(3) an internal coil which is ~~implanted~~ implantable in ~~the body~~ a patient, ~~and the~~
internal coil receives electricity from the external coil by at least transcutaneous energy
transmission;
(4) a waveform rectifier circuit ~~connecting~~ connected to the internal coil; and
(5) electrodes ~~which are~~ connected to the waveform rectifier circuit,
wherein the electrodes are capable of being positioned in contact with the a gastric
wall and are connecting to the waveform rectifier circuit, and
wherein a sine wave current is feed from the pulse generator when the external coil is
positioned at an external site in proximity to where the internal coil is implanted so that a long pulse
stimulation (LPS) with a pulse width of 300ms or more is effective on the stomach.
2. (currently amended) The gastric electrical stomach stimulation apparatus according
to claim 1, wherein the ~~apparatus is used for~~ patient includes a gastroparesis patients whose vagus
nerve has been cut.
3. (currently amended) A method ~~of for~~ treating gastroparesis, comprising:
connecting a pulse generator to an external coil;
receiving electricity at an internal coil from the external coil by at least
transcutaneous energy transmission, the internal coil being implantable in a gastroparesis patient;
connecting a waveform rectifier circuit to the internal coil;

connecting electrodes to the waveform rectifier circuit, the electrodes are capable of being positioned in contact with a gastric wall;

feeding a sine wave current from the pulse generator when the external coil is positioned at an external site in proximity to where the internal coil is implanted so that an electrical stimulation is effective on the stomach; and

selecting a frequency and amplitude of the sine wave current so that the electrical stimulation is providing long pulse stimulation with a pulse width of 300ms or more to the gastroparesis patients whose vagus nerve has been cut.

4. (currently amended) The method according to claim 3, wherein the long pulse stimulation is electrical stimulation of square waves with an amplitude of 4 mA, ~~a pulse width of 300 ms~~ and a frequency of 0.03-0.06 Hz.

5. (new) The gastric electrical stomach stimulation apparatus according to claim 1, wherein the electrodes have a distance therebetween in the range of 5-10 mm.

6. (new) The gastric electrical stomach stimulation apparatus according to claim 1, further comprising a ferrite positioned in at least a central portion of both the external coil and the internal coil, wherein the electricity transmission efficiency between the external coil and the internal coil is increased.